Homework 9

Due Tuesday, July 21th at the beginning of class

1. Suppose that a large lot with 10000 manufactured items has 30 percent defective items and 70 percent nondefective. You choose a subset of 10 items to test.

   (a) What is the probability that at most 1 of the 10 test items is defective?
   (b) Approximate the previous answer using the binomial distribution.

2. Fix $0 < p < 1$ and suppose there is a coin that obtains a head with probability $p$. We flip the coin 17 times and get a total of 5 heads. Given this information, what is the chance that 3 of those heads occurred in the first 10 flips?